

Amdt. dated September 24, 2004
Reply to Office action of June 24, 2004

Serial No. 09/755,832
Docket No. TUC920000050US1
Firm No. 0018.0082

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for updating code in a nodal system including at least ~~two~~ three nodes, wherein each node includes a processing unit and a memory including code, and wherein the nodes communicate over a communication interface, comprising:

transmitting, with at least one querying node, a request to at least ~~one~~ two queried node nodes in the nodal system for a level of the code at the node nodes over the communication interface;

receiving, with one node, ~~a response~~ responses from the queried node nodes receiving the request indicating the level levels of code at the queried node nodes over the communication interface; and

determining, with the node receiving the response responses, whether ~~at least one~~ queried node has a higher code level.

2. (Currently Amended) The method of claim 1, further comprising:

retrieving, with the node receiving the response, a copy of the code at the higher code level queried node if one of the at least two queried node nodes has the determined higher code level; and

updating, with the node retrieving the copy of the code, the memory with the retrieved copy of the code at the higher code level from the queried node.

3. (Currently Amended) The method of claim 1, wherein the node receiving the response from the queried node nodes and determining whether the queried node ~~has~~ nodes have the higher code level comprises the querying node or a node that did not transmit the request to the queried node.

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4. (Original) The method of claim 2, further comprising:
broadcasting, with the queried node having the highest code level, the code to multiple nodes over the communication interface, wherein the nodes retrieve the copy of the code by reading the broadcast of the code on the communication interface.
5. (Original) The method of claim 1, wherein determining whether one queried node has a higher code level is performed each time the nodal system is reset or the querying node is reset independently.
6. (Currently Amended) The method of claim 1, wherein multiple querying nodes transmit the request for the code level to at least two ~~[[one]] queried node nodes~~, and wherein the queried node ~~nodes~~ broadcasts broadcast information on the code level to the nodes.
7. (Currently Amended) The method of claim 1, wherein the queried node ~~nodes~~ serially broadcasts transmit the code level information to the nodes.
8. (Currently Amended) The method of claim 1, wherein all nodes in the nodal system transmit the request to ~~[[the]]~~ at least ~~[[one]]~~ two queried nodes and determine whether the queried nodes have the higher code level.
9. (Original) The method of claim 1, wherein each node has the same code set, wherein a portion of the code includes instructions used by all the nodes in the system and wherein the code includes instructions for functions used exclusively by each of the nodes.
10. (Original) The method of claim 1, wherein a first node is capable of controlling an accessor in a storage library system to access storage cartridges and wherein a second node is capable of interfacing with a host system and communicating commands from the host system to the first node to execute.

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11. (Currently Amended) The method of claim 1, wherein the at least one querying node executes a routine to transmit the requests to the at least ~~[[one]]~~ two queried ~~node~~ nodes, receive the response from the at least one queried node, and determine whether the at least one queried node has a higher code level than a code level indicated in a parameter in the memory, wherein the parameter is initially set to the code level of the querying node.

12. (Original) The method of claim 1, wherein the nodes further perform:
maintaining a parameter indicating the code level at the node;
initializing the parameter with the code level at the querying node before transmitting the requests for the code level at the other nodes; and
updating the parameter with the code level at the queried nodes if the queried nodes have the higher code level.

13. (Currently Amended) A system for updating code in a nodal system, comprising:
at least ~~two~~ three nodes, wherein each node includes a processing unit and a memory including code;
a communication interface, wherein the nodes communicate over the communication interface;
program logic in a computer readable medium for causing the node processing units to perform:

- (i) transmitting a request to at least ~~one~~ two queried ~~node~~ nodes in the nodal system for a level of the code at the ~~node~~ nodes over the communication interface;
- (ii) receiving ~~a response~~ responses from the queried ~~node~~ nodes receiving the request indicating the ~~level~~ levels of code at the queried ~~node~~ nodes over the communication interface; and
- (ii) determining whether ~~at least one~~ queried node has a higher code level.

14. (Currently Amended) The system of claim 13, wherein the program logic is further capable of causing the node processing units that receive the response from the queried node to perform:

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retrieving a copy of the code at the higher code level queried node if one of the at least two queried node nodes has the determined higher code level; and

updating the memory with the retrieved copy of the code at the higher code level from the queried node.

15. (Currently Amended) The system of claim 13, wherein the node receiving the response from the queried node nodes and determining whether the queried node ~~has~~ nodes have the higher code level comprises the querying node or a node that did not transmit the request to the queried node.

16. (Original) The system of claim 14, wherein the program logic is further capable of causing the queried node processing units to perform:

broadcasting, with the queried node having the highest code level, the code to multiple nodes over the communication interface, wherein the nodes retrieve the copy of the code by reading the broadcast of the code on the communication interface.

17. (Original) The system of claim 13, wherein determining whether one queried node has a higher code level is performed each time the nodal system is reset or the querying node is reset independently.

18. (Currently Amended) The system of claim, wherein multiple querying nodes transmit the request for the code level to ~~[[one]]~~ at least two queried node nodes, and wherein the queried node nodes broadcasts broadcast information on the code level to the nodes.

19. (Currently Amended) The system of claim 13, wherein the program logic is further capable of causing the queried node processing units to perform serially broadcasts transmits the code level information to the nodes.

20. (Currently Amended) The system of claim 13, wherein all nodes in the nodal system transmit the request to the at least ~~[[one]]~~ two queried nodes and determine whether the queried nodes have the higher code level.

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21. (Original) The system of claim 13, wherein each node has the same program logic code set, wherein a portion of the code includes instructions used by all the nodes in the system and wherein the code includes instructions for functions used exclusively by each of the nodes.

22. (Original) The system of claim 13, wherein a first node is capable of controlling an accessor in a storage library system to access storage cartridges and wherein a second node is capable of interfacing with a host system and communicating commands from the host system to the first node to execute.

23. (Currently Amended) The system of claim 13, wherein the program logic is further capable of causing the querying node processing units to perform:

executing a routine to transmit the requests to the at least ~~[[one]]~~ two queried ~~node~~ nodes, receive the response from the at least one queried node, and determine whether the at least one queried node has a higher code level than a code level indicated in a parameter in the memory, wherein the parameter is initially set to the code level of the querying node.

24. (Original) The system of claim 13, wherein the program logic is further capable of causing the node processing units to perform:

maintaining a parameter indicating the code level at the node;

initializing the parameter with the code level at the querying node before transmitting the requests for the code level at the other nodes; and

updating the parameter with the code level at the queried nodes if the queried nodes have the higher code level.

25. (Currently Amended) An article of manufacture for updating code in a nodal system including at least ~~[[two]]~~ three nodes, wherein each node includes a processing unit and a memory including code, wherein the nodes communicate over a communication interface, and wherein the article of manufacture comprises code in a computer readable medium capable of causing the node processing units to perform:

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transmitting, with at least one querying node, a request to at least ~~one~~ two queried node ~~nodes~~ in the nodal system for a level of the code at the node ~~nodes~~ over the communication interface;

receiving, with one node, ~~a response~~ responses from the queried node ~~nodes~~ receiving the request indicating the ~~level~~ levels of code at the queried node ~~nodes~~ over the communication interface; and

determining, with the node receiving the ~~response~~ nodes, whether ~~at least one~~ of the queried node ~~nodes~~ has a higher code level.

26. (Currently Amended) The article of manufacture of claim 25, wherein the article of manufacture code is further capable of causing the node processing units to perform:

retrieving, with the node receiving the response, a copy of the code at the higher code level queried node if one of the at least two queried node ~~nodes~~ has the determined higher code level; and

updating, with the node retrieving the copy of the code, the memory with the retrieved copy of the code at the higher code level from the queried node.

27. (Currently Amended) The article of manufacture of claim 25, wherein the node receiving the response from the queried node ~~nodes~~ and determining whether the queried node ~~has nodes have~~ the higher code level comprises the querying node or a node that did not transmit the request to the queried node.

28. (Original) The article of manufacture of claim 26, wherein the article of manufacture code is further capable of causing the node processing units to perform:

broadcasting, with the queried node having the highest code level, the code to multiple nodes over the communication interface, wherein the nodes retrieve the copy of the code by reading the broadcast of the code on the communication interface.

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29. (Original) The article of manufacture of claim 25, wherein determining whether one queried node has a higher code level is performed each time the nodal system is reset or the querying node is reset independently.

30. (Currently Amended) The article of manufacture of claim 25, wherein multiple querying nodes transmit the request for the code level to ~~[[one]~~ at least two queried node nodes, and wherein the queried ~~node broadcasts~~ nodes broadcast information on the code level to the nodes.

31. (Currently Amended) The article of manufacture of claim 25, wherein the article of manufacture code is further capable of causing the queried ~~node nodes~~ serially broadcasts transmit the code level information to the nodes.

32. (Currently Amended) The article of manufacture of claim 25, wherein the article of manufacture code is further capable of causing all nodes in the nodal system to transmit the request to ~~[[the]]~~ at least one two queried nodes and determine whether the queried nodes have the higher code level.

33. (Original) The article of manufacture of claim 25, wherein each node has the same code set, wherein a portion of the code includes instructions used by all the nodes in the system and wherein the code includes instructions for functions used exclusively by each of the nodes.

34. (Original) The article of manufacture of claim 25, wherein a first node is capable of controlling an accessor in a storage library system to access storage cartridges and wherein a second node is capable of interfacing with a host system and communicating commands from the host system to the first node to execute.

35. (Currently Amended) The article of manufacture of claim 25, wherein the article of manufacture code is further capable of causing the querying node to execute a routine to transmit the requests to the at least ~~[[one]]~~ two queried node nodes, receive the response from the

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at least one queried node, and determine whether the at least one queried node has a higher code level than a code level indicated in a parameter in the memory, wherein the parameter is initially set to the code level of the querying node.

36. (Original) The article of manufacture of claim 25, wherein the article of manufacture code is further capable of causing the nodes to perform:

- maintaining a parameter indicating the code level at the node;
- initializing the parameter with the code level at the querying node before transmitting the requests for the code level at the other nodes; and
- updating the parameter with the code level at the queried nodes if the queried nodes have the higher code level.